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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,350	03/25/2004	Yukio Taniyama	1080.1137	5459

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EXAMINER	
CHOI, WOO H	

ART UNIT	PAPER NUMBER
2189	

DATE MAILED: 08/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/808,350	TANIYAMA, YUKIO	
	Examiner	Art Unit	
	Woo H. Choi	2189	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 June 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong et al. (US Patent No. 6,260,006, hereinafter "Wong") in view of Chan el al. (US Patent No. 6,775,087, hereinafter "Chan").

Wong discloses, a magnetic tape unit to which a cartridge accommodating a magnetic tape is detachably attached and which accesses the magnetic tape in accordance with an access request from a host, wherein the cartridge accommodates the magnetic tape, the magnetic tape unit (figure 3) comprising:

a magnetic tape drive which accesses the magnetic tape;

a memory read/writer; and

an access-controlling section which allows the cartridge memory to store management information of a plurality of volumes (figure 2) using the memory read/writer, and in which based on the management information, a LOAD command of the cartridge from the host is replaced by a command for accessing a region corresponding to a volume of a virtual cartridge which receives the LOAD command from the host in the magnetic tape accommodated in an actual cartridge loaded in this magnetic tape unit, the access-controlling section allowing the

magnetic tape drive to access the magnetic tape accommodated in the actual cartridge (col. 2, lines 24 – 37, col. 7, lines 13 – 22, and figures 5 and 6, commands from the host computer to access a specified tape volume is replaced with a series of internal command to present a virtual tape volume to the requesting host).

However, Wong does not specifically disclose that the tape cartridge includes a cartridge memory that stores volume information in a nonvolatile and rewritable. On the other hand, Chan discloses a tape cartridge that comprises a non-volatile cartridge memory that stores volume information manner (col. 1, lines 36 – 41 and figure 9). It would have been obvious to one of ordinary skill in the art, having the teachings of Wong and Chan before him at the time the invention was made, to use the non-volatile cartridge memory as taught by Chan in the tape cartridge of Wong, to increase the speed of data access by enabling a tape drive to quickly locate and access a data file (Chan, col. 1, lines 36 – 41).

3. Claims 1 – 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kayoma (US Patent No. 5,940,849) in view of Chan el al. (US Patent No. 6,775,087, hereinafter "Chan").

4. With respect to claims 1, 2, and 4 Kayoma discloses a magnetic tape unit to which a cartridge accommodating a magnetic tape is detachably attached and which accesses the magnetic tape in accordance with an access request from a host, wherein the cartridge accommodates the magnetic tape, the magnetic tape unit (figure 11) comprising:

a magnetic tape drive which accesses the magnetic tape;

a memory read/writer; and

an access-controlling section which allows the cartridge memory to store management information of a plurality of volumes using the memory read/writer, and in which based on the management information, a LOAD command of the cartridge from the host is replaced by a command for accessing a region corresponding to a volume of a virtual cartridge which receives the LOAD command from the host in the magnetic tape accommodated in an actual cartridge loaded in this magnetic tape unit, the access-controlling section allowing the magnetic tape drive to access the magnetic tape accommodated in the actual cartridge (abstract, col. 3, lines 15 – 21, and figure 6, a tape cartridge contains multiple volumes with each logical volume recognized as physical volume would need to translate commands to individual physical volumes containing a single volume to internal commands appropriate to access multiple logical volumes in a single tape cartridge),

wherein the access-controlling section remains a state in which the magnetic tape is loaded in the actual cartridge in accordance with an UNLOAD command of the cartridge from the host, and the access-controlling section brings this state into a state in which the actual cartridge can be taken out in accordance with an EJECT command from the host (figure 15).

However, Kayoma does not specifically disclose that the tape cartridge includes a cartridge memory that stores volume information in a nonvolatile and rewritable manner. On the other hand, Chan discloses a tape cartridge that comprises a non-volatile cartridge memory that stores volume information (col. 1, lines 36 – 41 and figure 9). It would have been obvious to one of ordinary skill in the art, having the teachings of Kayoma and Chan before him at the time the invention was made, to use the non-volatile cartridge memory as taught by Chan in the tape

cartridge of Kayoma, to increase the speed of data access by enabling a tape drive to quickly locate and access a data file (Chan, col. 1, lines 36 – 41).

5. With respect to claim 3 see figure 15.

6. Claims 1 – 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogata et al. (US Patent No. 5,327,535) in view of Chan el al. (US Patent No. 6,775,087, hereinafter "Chan").

Ogata disclose a magnetic tape storage system with a plurality of virtual volumes on a single tape medium similar to Wong and Kayama's systems discussed above. However, like Wong and Kayama, Ogata does not specifically disclose that the tape cartridge includes a cartridge memory that stores volume information in a nonvolatile and rewritable manner. On the other hand, Chan discloses a tape cartridge that comprises a non-volatile cartridge memory that stores volume information (col. 1, lines 36 – 41 and figure 9). It would have been obvious to one of ordinary skill in the art, having the teachings of Ogata and Chan before him at the time the invention was made, to use the non-volatile cartridge memory as taught by Chan in the tape cartridge of Ogata, to increase the speed of data access by enabling a tape drive to quickly locate and access a data file (Chan, col. 1, lines 36 – 41).

Handling of load and unload commands are shown in figures 5, 7, 18 and 18 of Ogata's disclosure.

Response to Arguments

7. Applicant's arguments filed June 13, 2006, have been fully considered but they are not persuasive.

8. Applicant argues that Wong cannot disclose nor suggest a certain feature of claim 1 without disclosing the cartridge memory as recited in claim 1, without explaining why this is so. The Examiner clearly stated that Wong does not teach a tape cartridge that includes a non-volatile cartridge memory. The Examiner has not stated that the cartridge memory disclose by Wong is the claimed cartridge memory. Nevertheless, Wong clearly shows memory in cartridge that contains volume control information in figure 2 as well as a memory read/writer used to read and write such information. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

8. Applicant further argues that there is no motivation to combine the teachings of Wong and Chan. Applicant states that "the Examiner has simply stated, with no evidence to support this assertion." Apparently, Applicant has not read the rejection statement carefully or has chosen to ignore the evidence presented. The motivation statement clearly points to col.1, lines 36 – 41 of Chan's disclosure as evidence. As to Applicant's argument regarding volume information not being stored in the cartridge, see figure 2.

9. Applicant's discussion regarding Wong's tape library control unit teaching away from the combination does not seem to bear any relationship with why one skilled in the art would or would not add a non-volatile memory that stores volume information to a single multi-volume tape cartridge. The combination would merely place the volume information already on the tape in the cartridge onto a non-volatile device that is also in the tape cartridge. This should not have any significant impact other than increasing the speed of data access as taught by Chan.

10. Applicant's arguments against Kayoma/Chan and Ogata/Chan combinations fail for the same reasons discussed above in reference to Wong/Chan combination.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Woo H. Choi whose telephone number is (571) 272-4179. The examiner can normally be reached on M-F, 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Reginald Bragdon can be reached on (571) 272-4204. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Woo H. Choi
August 25, 2006